

SYLVAPLY

DOUGLAS FIR WATERPROOF-GLUE PLYWOOD

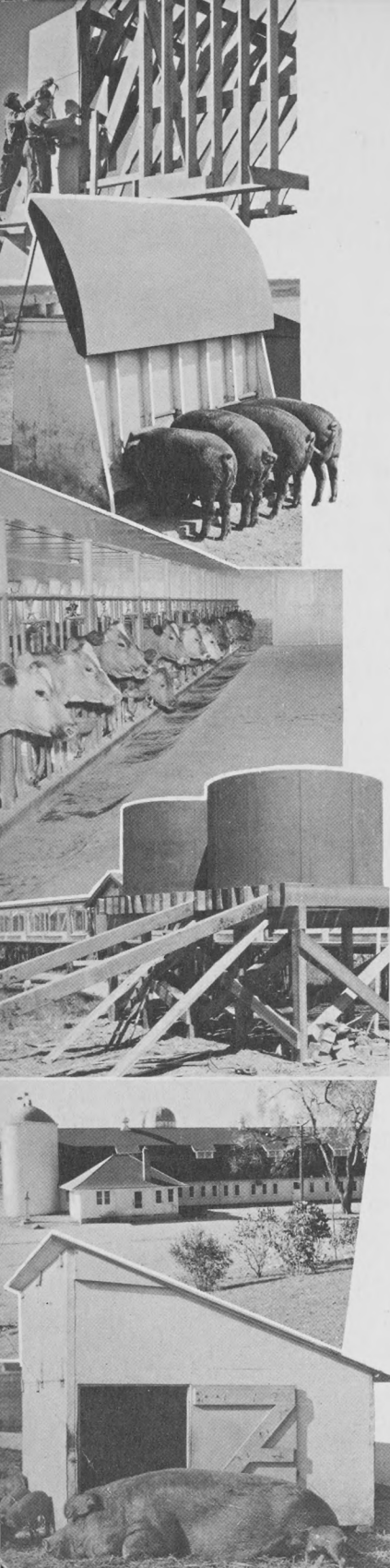
farm book



The SYLVAPLY WAY

A guide to profitable farm buildings and
better home improvements with handy
panels of modern Douglas Fir Plywood.





CONTENTS

Beef Cattle Shelters	- -	Page 5
Chick Brooder	- - - -	Page 15
Dairy Barns	- - - -	Page 13
Duct Work	- - - -	Page 17
Extra Rooms	- - - -	Page 20
Freezer Cabinets	- - -	Page 18
General Farm Uses Illustrated	-	Pages 6-7
Granaries and Silos	- - -	Page 11
Hog Feeders and Farrowing Pens		Page 16
Home Building Uses	- - -	Page 19
Implement Sheds	- - -	Page 4
Information, Sources of	-	Inside Back Cover
Loafing Barns	- - -	Page 3
Milking Parlors	- - -	Page 5
Nailing Plywood	- - -	Page 9
Painting Douglas Fir Plywood	-	Page 24
Plan Sources	- - - -	Page 12
Planning Farm Buildings	- -	Page 3
Plywood—Description and Uses	-	Page 1
Plywood—Grades and Sizes	-	Page 24
Plywood—How it is Made	- -	Page 2
Plywood Joinery is Simple	-	Page 23
Plywood—Methods of Application	-	Page 10
Plywood—Strength of	- -	Page 8
Plywood—Working with	- -	Page 8
Poultry Houses	- - -	Page 14
Remodelling Rooms	- -	Page 20
Storage Walls	- - -	Page 22
Vegetable Storage	- - -	Page 15
Where to Buy Sylvaply	- -	Back Cover

ASK YOUR LOCAL LUMBER DEALER ABOUT

SYLVAPLY DOUGLAS FIR WATERPROOF-GLUE **PLYWOOD**

MacMillan & Bloedel Limited

VANCOUVER - EDMONTON - CALGARY - WINNIPEG
LONDON - WINDSOR - TORONTO - MONTREAL - QUEBEC CITY

WHAT YOU SHOULD KNOW ABOUT MODERN PLYWOOD



25545
#35006
\$35
JA

MORE than 300,000,000 square feet of Douglas Fir plywood is now made every year in the plywood plants of British Columbia to meet an ever growing demand for modern waterproof-glue plywood.

This amazingly versatile material has more than 1000 uses. In house construction it is used for sheathing, siding, sub-flooring, kitchen cupboards and interior finish. Its marine uses include planking for skiffs, power boats, commercial fishing vessels and drydocks. It is used in the manufacture of hundreds of commodities ranging from doors and furniture to farm freezers and harvesters. Industrial uses range from concrete forms to railroad cars.

It is no wonder that farmers, too, are finding modern waterproof-glue plywood the answer to scores of building problems.

Sylvaply plywood is a convenient sheet material—4'x8' or longer panels—made of thin sheets of rugged Douglas Fir cross-laminated for strength and toughness combined with light weight. The plies are scientifically bonded together with waterproof glue to produce the highest type of plywood for use indoors or outdoors.

Plywood can be easily worked with ordinary carpenter tools. It is easy to saw and easy to nail. Nails can be driven close to the edges without splitting the material. It is light—a panel of 4' x 8' 5/16" Sylvaply sheathing grade weighs only 30 lbs.—yet it

is immensely strong. Pound for pound plywood is stronger than steel.

Used to sheathe farm buildings—or homes—plywood actually adds strength and rigidity to the structure to resist the effects of high winds or settling.

This unequalled combination of strength, easy workability and light weight makes it practical for building small or portable farm structures of all kinds. As a utility material for farm repair and maintenance jobs, from re-siding barns to building feed troughs, no other material has the same range of usefulness.

Yet this tough, hard-working panel comes in sanded grades, too, for home improvements and home building. Interior walls and ceilings of Sylvaply Douglas Fir plywood—so easy to nail up and finish—provide crackproof panelled walls for the lifetime of your home.

In the pages that follow there are many thought-provoking ideas on progressive farm improvements that can be carried out economically with the aid of modern waterproof-glue plywood.

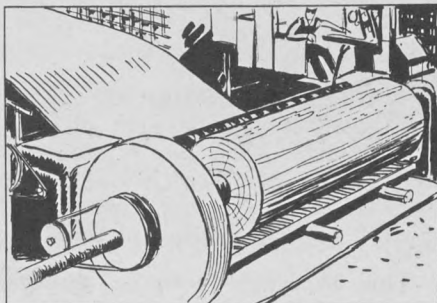
For advice and information on profitable farm improvements don't overlook the many valuable centers of information available to you. (See list inside back cover.)

Your nearest lumber dealer—probably one of the thousands all over Canada handling Sylvaply plywood—is another useful source of practical information on your building needs.

HOW SYLVAPLY PLYWOOD IS MADE



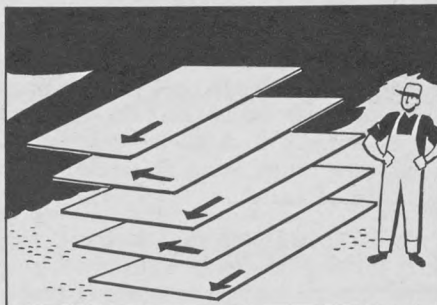
Sylvaply is made from the mighty Douglas Fir tree which grows along the British Columbia coast. Douglas Fir is one of the strongest structural woods known.



At the Sylvaply mills, massive logs in 8 foot lengths are centred in a huge lathe and revolved against a razor sharp blade to peel off a thin sheet of wood.



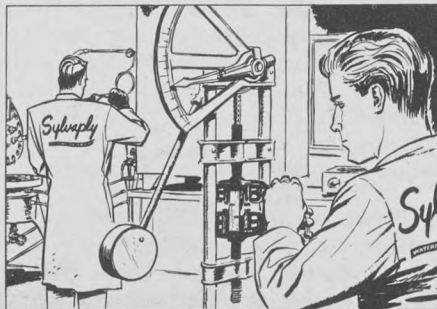
There is a secret to Sylvaply's strength! The "plies" of wood are coated with waterproof glue and placed together with grain of each layer running at right angles to the layer next to it.



Wood splits easily along the grain but will not split across the grain. The grain in plywood runs both ways, so cannot split either way.

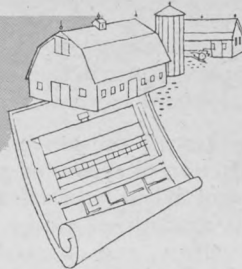


This glue and wood sandwich is placed in a scientifically controlled hot press where the plies are permanently welded together, producing a Sylvaply plywood panel, light yet immensely strong.



In the Sylvaply Laboratories regular "steam and ice" tests keep a constant check on the ability of all plywood made to stand up against any type of climatic condition when used outdoors.

PLANNING PROFITABLE FARM BUILDINGS



WELL planned farm buildings are as much a part of the farmer's profit making equipment as modern farm machinery.

Correctly designed structures increase stock yields by saving more calves, hogs and chicks. They increase profits by decreasing disease losses in livestock and poultry. They save hours of valuable working time daily. Yet by careful planning and the use of modern materials such buildings can be erected at moderate cost.

Old farm buildings made obsolete by changed local conditions can often be remodelled to serve new purposes. But if you are faced with the need for completely new buildings, it is well worth while to investigate some of the ideas being tried out in some areas today.

These range from small portable structures to larger buildings of the type discussed below.

The loafing barn, for example, illustrates a type of low-cost utility farm building that is arousing wide interest. The structure supports only the roof—the ground supports the hay. Free of stanchions, the loafing area can be partitioned to accommodate other types of stock if there is space going to waste. Construction is much simpler than for a conventional barn with hay loft, and the farmer with his helpers can do much of the work himself.

Not everyone agrees on the value of these relatively new ideas but they are reviewed here to stimulate your thinking and to help your planning on the next new farm building you need.

LOAFING BARNS



One of the most widely discussed innovations in dairy farming is the loafing barn used in conjunction with a well planned milking parlor. Loafing arrangements are adaptable to most areas except where bedding material is scarce. Although not favored for those dairy farms where individual animals must sometimes be located quickly, nor by those who object to dehorning the cows, the system has many advantages.

Under the more natural conditions of the loafing barn animals are more comfortable, cleaner and less liable to udder injury.

Labor is greatly reduced. Manure can be removed once or twice yearly with power machinery. Moreover, the successive layers of bedding increase the volume and value of the manure.

If the herd is reduced only minor changes are required to put the space saved to use for other types of stock.

Sometimes stanchion barns are converted to loafing barns but the economics of such a changeover need careful study.

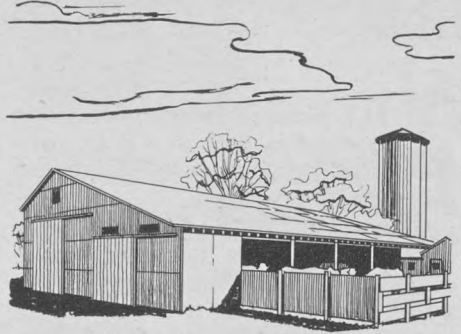
However, when a new barn is needed, the advantages of constructing a low cost loafing type shed are well

worth considering. With no hay loft to support, construction is simple, inexpensive and speedy.

Whether you use conventional frame construction or creosoted poles, tough, kickproof Sylvaply panels will provide a tight draft-proof siding that speeds construction and contributes more strength and rigidity to the structure than any other board or sheet material.

The sketch on this page shows a modern loafing barn with hay storage in the back portion. In some cases it may be practical to have a self-feeding partition that can be moved back as the winter progresses but usually some other form of self-feeding system is used.

The lower construction cost per head and increased efficiency make the single story loafing barn one of the most interesting farm building ideas developed in recent years.



IMPLEMENT SHEDS



A carefully designed implement shed makes money for the farmer by protecting his big investment in farm machinery against excessive depreciation and unnecessary repair costs.

Modern farm machines are expensive and complicated. Tractors, combines, pick-up balers, forage harvesters, power sprayers and dusters, fertilizer and grain drills—all have more moving parts and do more work than the horse drawn equipment of yesterday.

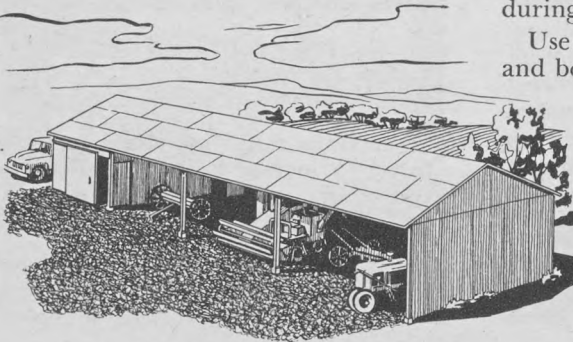
Year round exposure to the elements means rust and rust means breakdowns. One or two days lost repair-

ing avoidable damage could mean the loss or partial loss of a crop.

Some authorities claim that deterioration of rubber due to unnecessary exposure to summer sun is even more costly than rust damage.

If you select a fairly well sheltered location for your machinery shed you will be able to leave both front and back open for economy and convenience. As shown in the sketch, a convenient machine shop can be enclosed at one end so you can do your repair work under cover and in comfort during slack winter months.

Use Sylvaply to sheathe the ends and both the inside and outside walls of the machine shop. Use Sylvaply to sheathe the roof, too. With mastic filled joints it will give years of service and will not require renewing because ordinary roofing material can be applied when the plywood begins to weather.



MILKING PARLORS



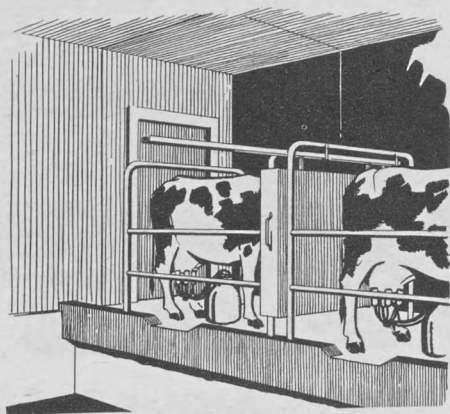
The loafing barn with separate milking parlor costs less to build than a conventional stanchion barn for the same number of animals. The milking parlor itself has many advantages.

Milking is faster and easier because the cows come to the milker—and at convenient ramp height for washing

udders and milking. The milk is cleaner because the cows are cleaner and because the relatively small milking area is easy to keep spotlessly clean.

Parlors may be built to handle two or more cows at a time. Feed boxes at milking stations soon train cows to make their way to the parlor along fenced entry lane. Entry, as well as exit, of animals to the return lane is easily controlled by the milker with chain and pulley opening doors.

In most areas regulations now permit milking parlor and milk house under same roof—a great convenience. Both may be built with plywood outside and inside. Tight, punctureproof interiors of Sylvaply can be enamelled white and are easy to keep spotlessly clean.



BEEF CATTLE SHELTERS

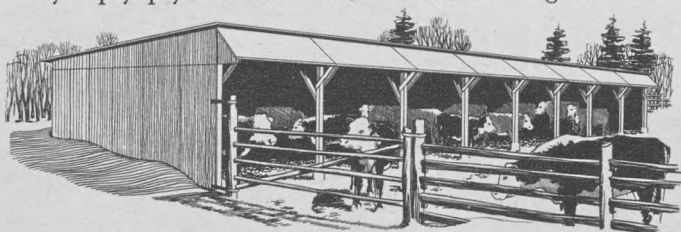


To prevent weight losses and hazard to stock from wintering in the open, simple shelters are less costly to build and much healthier for beef cattle than closed barns.

A shelter of simple frame construction (or poles) made rigid, tight and weatherproof with a single skin of Sylvaply plywood on roof, back and

ends can be completed with surprising ease and speed.

Plan carefully. Build near feed supply and facing in whatever southerly direction is best. Build feed racks to cut waste. If you use grain, cut down handling by the use of conveyors or blowers direct from storage through grinders and into self feeders or overhead bins. Mix grain and protein concentrate when grinding. Make sure you have headroom for power equipment to remove manure.

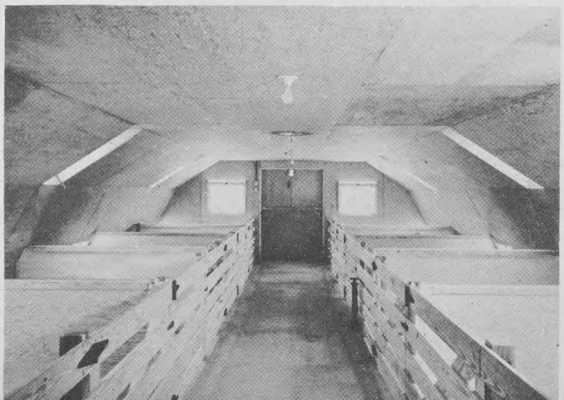
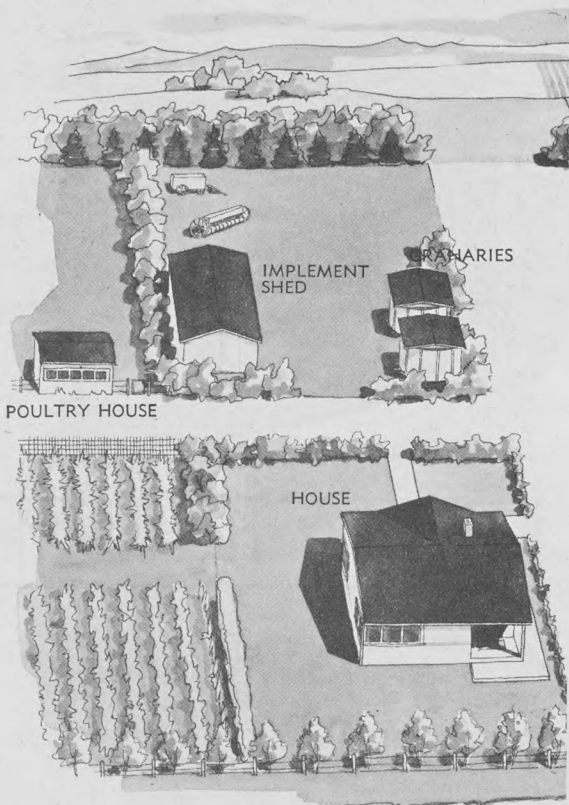
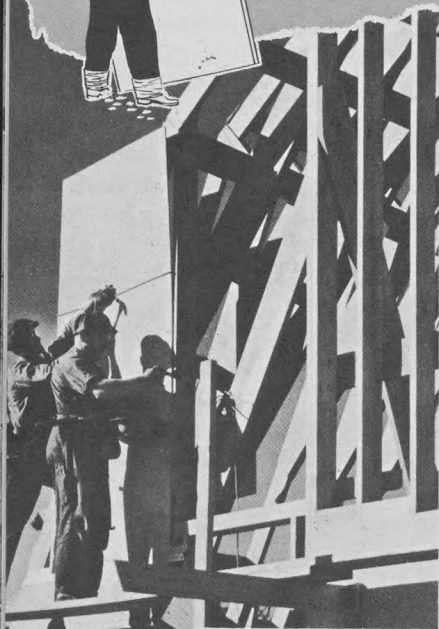


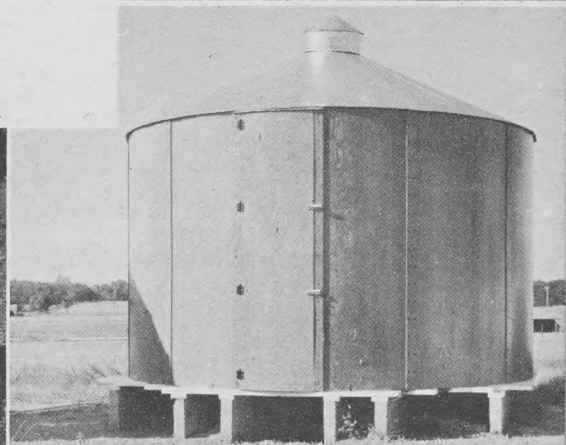
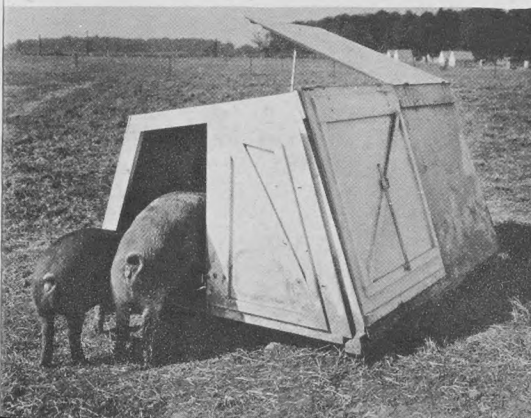
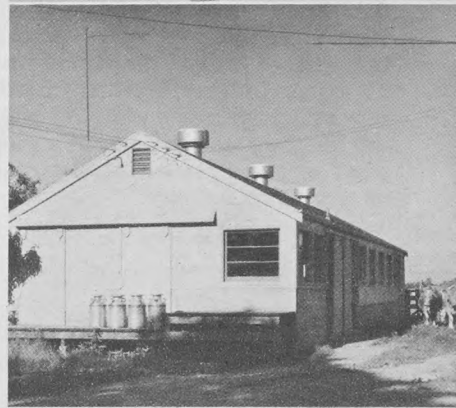
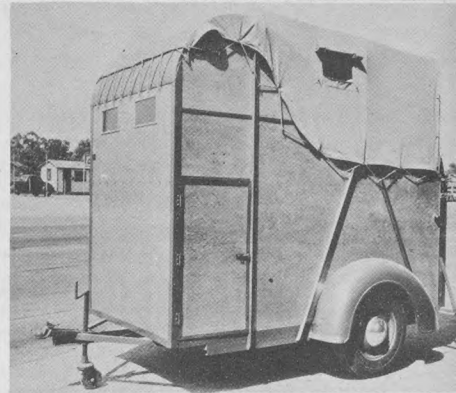
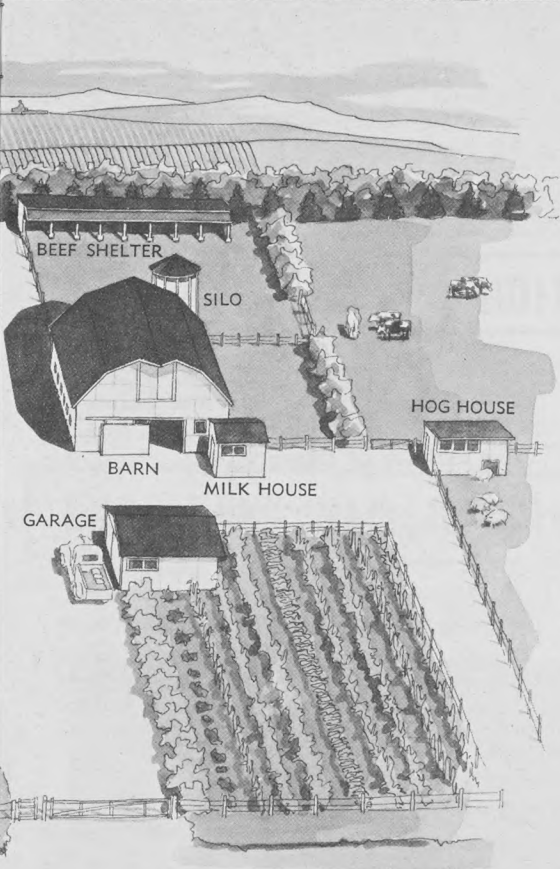
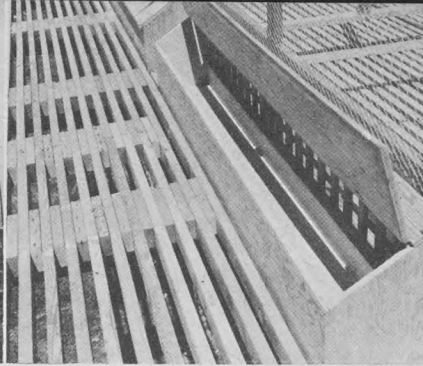
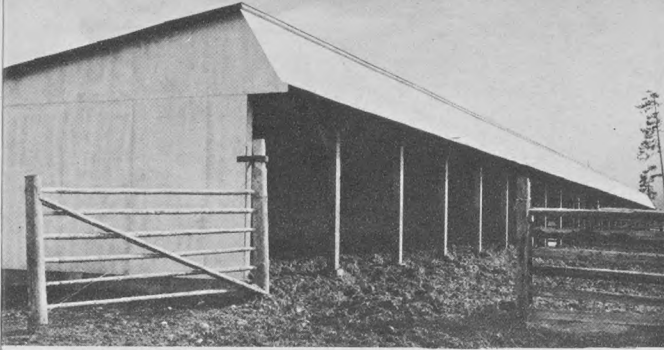
SYLVAPLY

THE ALL-PURPOSE SHEET BUILDING MATERIAL



PHOTOS and farm sketch show the wide range of uses for modern plywood. Keep several panels of 5/16" or 1/4" Sylva Ply on hand for odd jobs. For larger projects consult your lumber dealer for grade and thickness required.





EASY TO WORK WITH



WHEN planning new buildings try to keep dimensions in multiples of four feet so you can use 4' x 8' plywood panels without sawing. In a structure with studs 24" apart, measure spacing accurately so that panel edges will always fall on stud centres.

When panels are to be sawn it can be done very quickly with an ordinary sharp handsaw (crosscut). A handy saw table for plywood, two trestles

and two 2x4's, is shown in sketch. There are no special "tricks" to using



plywood. Remember it is real Douglas Fir engineered into sheets to produce large panels that are splitproof and punctureproof, yet are light and easy to saw and nail.

STRONGER CONSTRUCTION

Because of the exceptional strength of Sylvaply plywood no special frame bracing is required to get structures that can withstand the racking action of high winds or settling. Similarly, portable buildings of plywood can take the roughest treatment in being moved from place to place with a minimum of wear and damage.

The following graphic comparisons

are based on tests conducted by the United States Forest Products Laboratory, Madison, Wisconsin, as to relative rigidity of frame walls.

These tests are here given in terms of 5/16" unsanded Sylvaply sheathing grade which is a popular grade and thickness for much farm construction as well as the sheathing of houses.

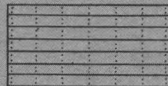
5/16" Sylvaply sheathing contributes 37% more rigidity than diagonal lumber sheathing which is regarded as the most rigid method of lumber sheathing known.



5/16" Sylvaply sheathing makes walls almost four times as rigid as cut-in 2x4 braces.



5/16" Sylvaply sheathing is 5.9 times as rigid as horizontal lumber sheathing.



These comparisons illustrate why the Central Mortgage & Housing Corporation and other building authorities do not require corner braces in houses framed for sheathing with 5/16" Douglas Fir plywood.

Douglas Fir plywood is not a covering which "hangs" on the framework. It goes into partnership with the framework to produce an exceptionally strong and rigid structure.

USE FEWER & SMALLER NAILS

Not only can plywood be nailed close to the edges without splitting, but fewer and smaller nails are required to do the job.

NAILING GUIDE FOR SHEATHING WITH SYLVAPLY

THICKNESS SYLVAPLY SHEATHING	SIZE OF NAILS	POUNDS OF NAILS PER 1000 SQ. FT.
Inches 5/16 3/8 1/2	Use 6d.—2" common nails spaced 6" o.c. at edges and 12" o.c. at intermediate sup- ports.	Approx. 11 lbs. or 1990 nails
5/8	Use 7d.—2 1/4" common nails spaced 6" o.c. at edges and 10" o.c. at intermediate sup- ports.	Approx. 13 1/2 lbs. or 2140 nails

Note 1 This section deals with uses for 5/16" sheathing grade. Greater thicknesses in above nailing guide are for flat roof decks, sub-flooring and other special uses on which your plywood dealer can advise you.

Note 2 1/4" sanded plywood for interior finish panelling should be nailed with 1 1/2" casing nails if available, or 1 1/2" finishing nails 6" apart on edges of panels and 8" apart on intermediate studs.

EXCELLENT NAIL HOLDING POWER

The cross-lamination which makes plywood splitproof also gives it extraordinary nail-holding properties. This quality is demonstrated in the summary below of tests conducted at the Forest Products Laboratory of Canada,

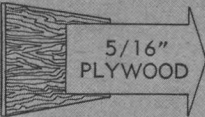
Ottawa, 1941, on the holding power of shingles nailed to 5/16" Douglas Fir plywood as compared to 7/8" Pine shiplap with 1 1/4" galvanized shingle nails.



1 Average maximum load required to pull shingles immediately after nailing.

2 Average maximum load required to pull shingles after alternately wetted and dried for two weeks.

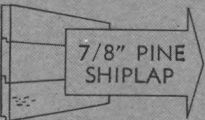
3 Average maximum load required to pull shingles after exposed to actual weather for more than three months.



108.6 lbs.

68.6 lbs.

73.3 lbs.

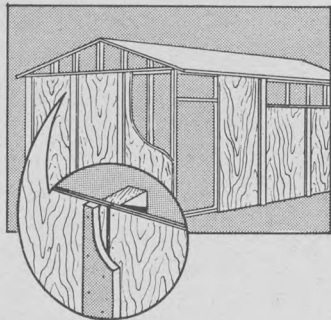


60.9 lbs.

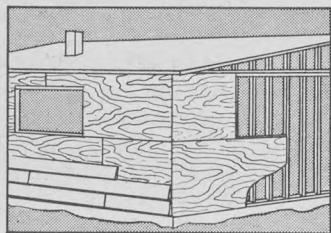
43.5 lbs.

46.4 lbs.

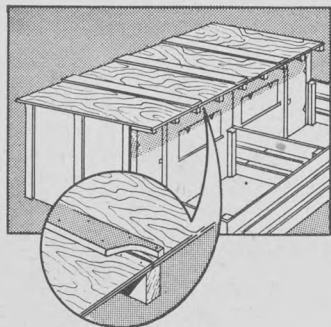
METHODS OF APPLICATION



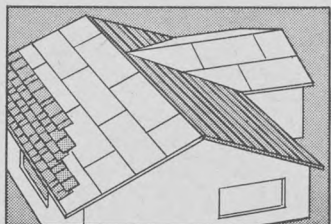
WALL SHEATHING (1) For simple, low cost buildings—chicken houses, garages, etc.—apply Sylvaply 5/16" sheathing panels vertically on studs set 24" apart. Leave a space of about $\frac{1}{8}$ " between panels and cover joints with battens. A coat of oil paint adds durability.



WALL SHEATHING (2) For homes and large buildings where maximum structural strength is needed, apply sheathing panels horizontally across studs set 16" or 24" apart. Stagger vertical joints as shown in sketch where possible. Put headers between studs to provide a nailing surface for panel edges. If required by your building by-laws, apply building paper of the non vapor barrier type. Cover with siding or cedar shingles applied in the usual way.



ROOF SHEATHING (1) For small utility buildings where length of rafter is eight feet or less, plywood sheathing may be applied lengthwise as shown in sketch. With battens over the joints and a coat of shingle stain, this low cost roof will give good service.



ROOF SHEATHING (2) For homes, barns and other fully permanent buildings apply 5/16" sheathing panels horizontally across rafters spaced 16" apart. Stagger the joints as shown. Shingles or other roofing material can be applied directly to the plywood. When using cedar shingles for a long-life roof it is a good idea to provide for "breathing" by applying 1" nailing strips, spaced as desired and nailed through the sheathing to rafters.

Normal precautions as to proper ventilation of enclosed roof spaces and eaves should be taken.

NOTE: Sylvaply 5/16" plywood sheathing helps prevent water from melting snow and ice from seeping up under shingles at the eaves and draining through into the building interior.

PLYWOOD GRANARIES AND SILOS

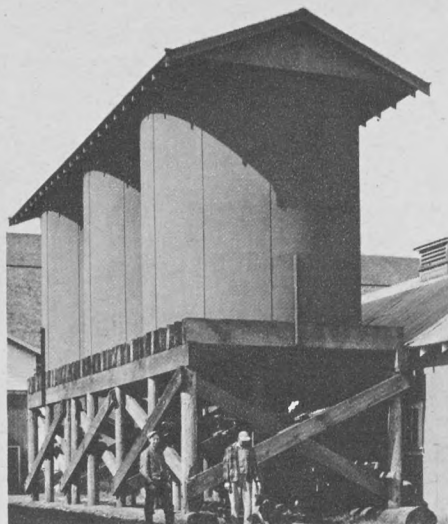


There is growing interest in a second type of plywood granary—a circular bin that employs the full strength and burst resistance of plywood in such a way that studding, metal ties and labor costs are reduced to a minimum.

The basic 1000 bushel circular structure consists of a single wall of plywood made by joining eleven 4' x 8' panels of $\frac{3}{8}$ " plywood. A permanent granary of this type can be erected on a wood joist floor, has a conical plywood roof and uses glued-up plywood hoops 14 ft. in diameter around which the plywood wall is "wound" to form the bin. Construction details for circular plywood granaries are available through lumber dealers or may be secured by writing direct to the Technical Section, MacMillan & Bloedel Limited, 837 West Hastings St., Vancouver 1, B. C.

The success of circular plywood grain bins has led to use of the same method for building plywood silos. Details of the method of construction used by farm building contractors are available on request.

Similar in principle to circular grain bin construction, plywood silos are constructed with outside framing hoops which are removed after erection and re-used.



Set of three grain bins as described at right. Note high platform for gravity feed to truck or grinder.

IN planning rectangular granaries to be built with Douglas Fir plywood, choose a size that uses 4 ft. by 8 ft. panels without cutting. For example, a 2000 bushel plywood granary could measure 16 ft. wide by 20 ft. long by 8 ft. from floor to top plate.

For maximum strength and resistance to grain pressures the plywood panels should be applied lengthwise across the studs. Whether the panels are applied horizontally as suggested or vertically, headers should be set between the studs halfway between the top and bottom plates.

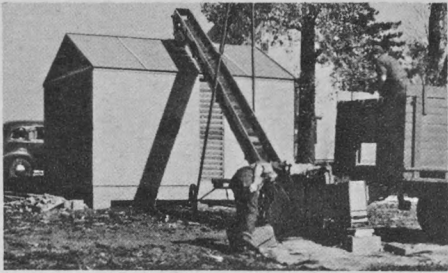
Plywood contributes great bracing strength to portable granaries but they are made even stronger if the panels are applied on the inside of the framework. This method leaves studs and plates exposed but provides a smooth lining.



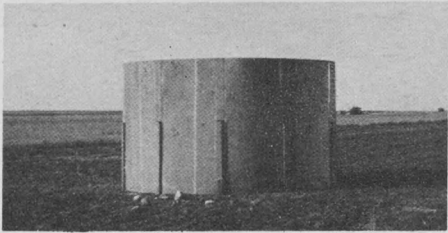
GRANARIES (Continued)

A temporary circular plywood granary to meet emergency grain storage needs is easy to build. Costs are lower than for the permanent circular granary because framing hoops, floor and regular roof are dispensed with. The 14 ft. diameter bin can be used later as a utility enclosure for other farm purposes, or the panels can be salvaged for other uses. The structure rests on the ground and waterproof paper provides the "floor". The roof can consist of either waterproof building paper or straw.

The bin can be converted to a permanent granary by building a platform and a conical plywood roof that is strapped to the rim.



Above: Ordinary framed granary with walls of 5/16" plywood. Below: Field granary as described left.



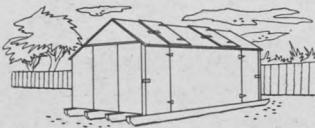
PLAN SOURCES



The Midwest Plan Service, Iowa State College, Ames, Iowa, has been a foremost agency in developing useful plans for United States farmers. These are available as shown:



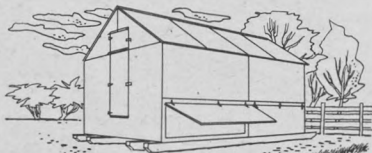
No. 73296 1100 bu. granary 15 cents



No. 73294 2000 bu. prefabricated grain bin (3 sheets) 45 cents
(Not Shown)



No. 72626 Double movable farrowing house convertible to 300 bu. grain bin 15 cents

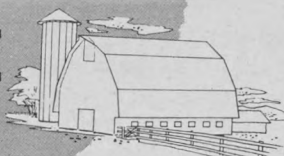


No. 77613 300 bu. movable hog self feeder with enclosed feeding floor 15 cents

No. 77614 400 bu. movable hog self feeder with storage space that can be sealed off from protected feeding trough 15 cents

For Canadian plan sources see list at back of book.

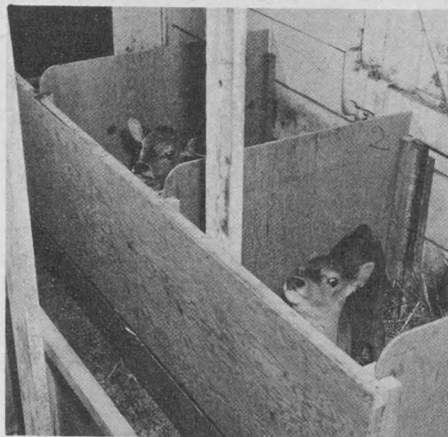
SYLVAPLY IN THE DAIRY BARN



TO line dairy barns, large smooth panels of $\frac{1}{4}$ " sanded Sylvaply are easily and quickly applied. Joints are close fitting and few in number. The surface takes an enamel finish for easy cleaning. It reduces drafts because it is crackproof.

It is tough and punctureproof, and not liable to damage by livestock. One farmer reports a panel of $\frac{3}{4}$ " Sylvaply used as a double-acting self-opening door between bullpen and stall still intact after years of battering service.

When lining a barn with plywood or other panel material, be sure to allow for free circulation of air in stud walls and ceiling joist space. It is a good plan to have ceiling paneling stopped just short of the walls and just short of the beams, which

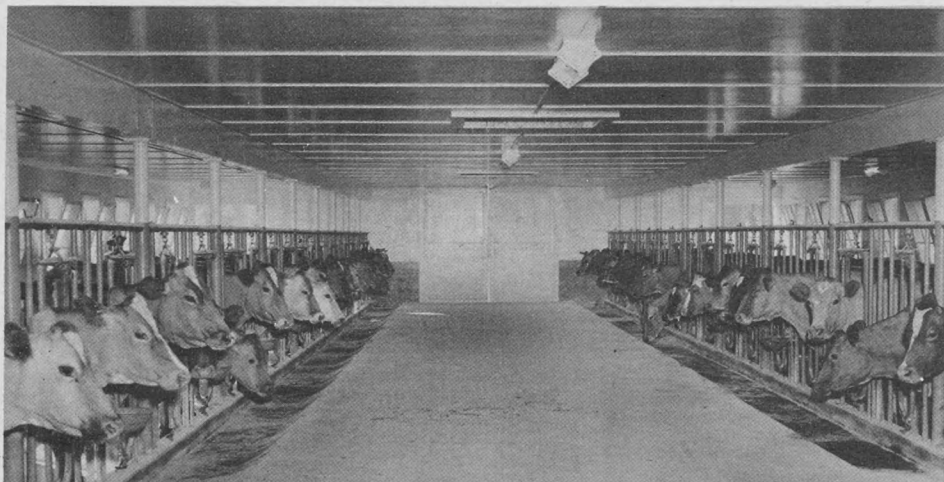


Calf pens built of Sylvaply withstand rough usage. Partitions slide out for easy cleaning.

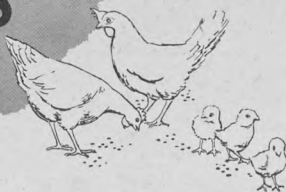
should not be boxed in. The humid condition of dairy barns makes these precautions against condensation and the danger of rot imperative.

Other barn uses for Sylvaply include overhead bulk feed bins. Drop feed directly into light carts which can also be handily made from Sylvaply.

A Modern Plywood-Lined Dairy Barn

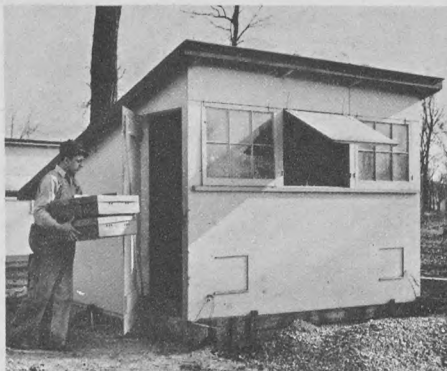


POULTRY HOUSES OF SYLVAPLY



GOOD poultry buildings are essential to cut down losses from disease and to get maximum egg production.

Your district agriculturist or Provincial Department of Agriculture can usually supply you with plans for the type of poultry building you need. Nearly all such plans can be adapted to construction with Sylvaply plywood to get tight, draft-free construction and a smooth, easily cleaned surface with no cracks to harbor the diseases and pests that cause so many losses.



Portable plywood brooder house. Such a building can be adapted for use as a poultry house for a flock of 25 to 30 birds.

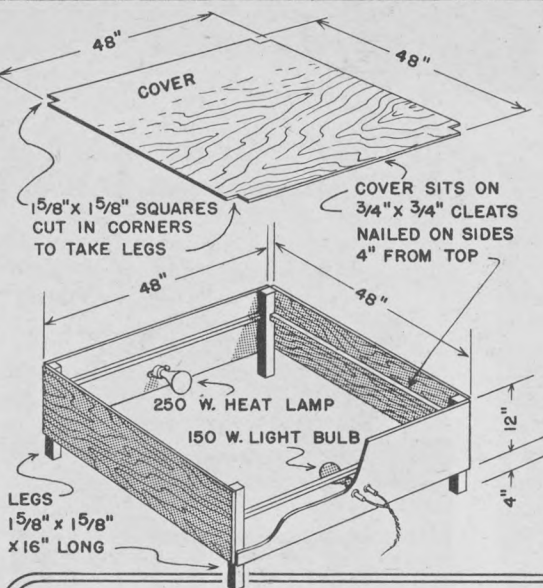
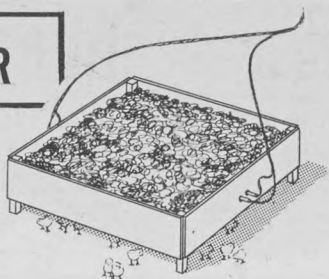


Portable plywood range shelter. Picture at left shows end-panels in place, converting it to brooder house.

Douglas Fir plywood contributes rigidity to structures to such an extent that it eliminates the need for heavy bracing in single and multiple story poultry houses. Portable brooder houses and range shelters built of Sylvaply withstand the racking and twisting of movement over uneven ground.

Once you have used Sylvaply Douglas Fir waterproof-glue plywood you will find it indispensable around the poultry farm for many purposes—feed bins for storing mash, grain and pellets, self-feeders and mash hoppers, feed carts, dropping boards, electric brooders and nest boxes.

PLYWOOD CHICK BROODER

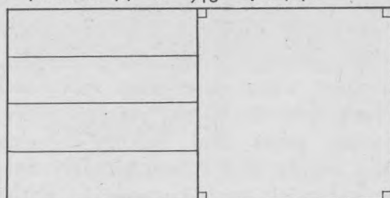


This electric lamp chick brooder is an example of scores of useful farm appliances that can be easily and quickly built with Sylvaply Douglas Fir plywood. Fill top of hover with fine peat moss and shavings. As birds grow increase height of brooder by placing bricks under the legs. A thermostat wired to the heat lamp will reduce operating cost. Adjust use of lamps to suit temperature needed.

MATERIALS NEEDED

- 1—4' x 8' sheet $\frac{1}{4}$ " or $\frac{5}{16}$ " Sylvaply
- 4 pieces— $\frac{3}{4}$ " x $\frac{3}{4}$ "—44 $\frac{3}{4}$ " long for cleats
- 4 pieces— $1\frac{5}{8}$ " x $1\frac{5}{8}$ "—16" long for legs
- 1—250 Watt heat lamp and 1—150 Watt light bulb
- 2 porcelain sockets to suit
- 20 ft. approved electrical appliance cord with plug-in cap

Cut top and sides from a single 4' x 8' panel of $\frac{1}{4}$ " or $\frac{5}{16}$ " Sylvaply.



BASEMENT "ROOT HOUSE"

The flavor of fresh fruit and vegetables can be preserved for winter enjoyment in a basement storage room built with plywood. A separate storage room about 8' x 10' located in a northerly corner away from chimney and heating pipes, well insulated and having adequate ventilation, is necessary to maintain ideal temperature of between 35° and 40° F.

When during early fall and late spring outside temperatures are higher than storage room, ventilators should be closed to maintain cool temperature. Ventilators should usually be open when outside temperature is

lower than in the storage room, but when inside temperature gets near freezing ventilators should be closed. To keep vegetables from shrivelling, keep air moist in storage area, adding moisture directly to vegetables now and then. Protect vegetables by wrapping them or putting them in closed containers. However, onions, pumpkins and squash require warmer temperatures and dry conditions for good storage.

For more information write Dominion Department of Agriculture for Bulletin No. 743.

HOG FEEDERS AND FARROWING PENS



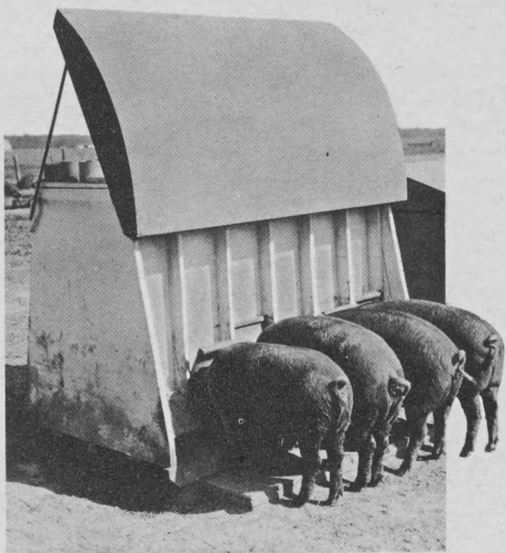
HOG production work can be reduced and returns increased by careful planning and the use of portable buildings.

Portable individual farrowing pens can be readily moved to clean, disease-free pasture. It is a good idea to place several pens in a small field close to the farm buildings and use a large portable self-feeder which can be filled once or twice weekly to feed all sows on the field.

Alternatively, move a portable feed house into the field so that grain and protein supplements are stored close at hand.

Sylvaply waterproof-glue plywood will help you to build your feeders, farrowing pens and colony houses quickly, easily and economically. Sylvaply is strong and durable to withstand the heavy wear common to hog houses. It provides tight, draft-free construction. It is easy to work with the tools you have on hand.

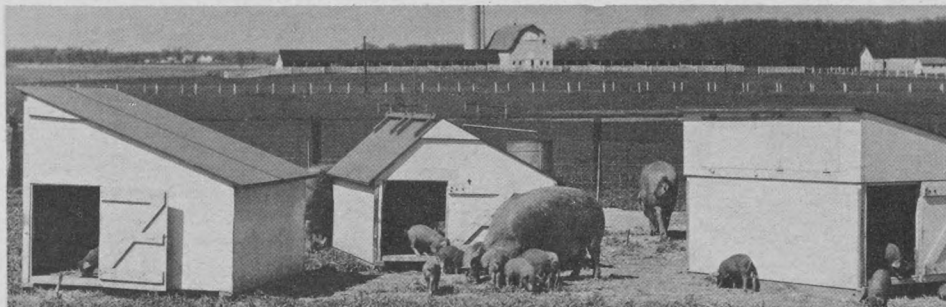
Many handy accessories can be made with plywood. For example, a 3'6" by 3'6" triangular corner haven with a small door in the front and heated by a 150-W. light globe is easily



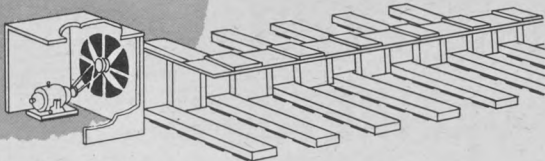
Portable hog self feeder designed to hold about 60 bushels.

built with plywood. This brooder will save many small pigs from being crushed by sows in cold weather. Do not use metal sockets. Two planks properly placed will protect the brooder from damage by sow.

Individual farrowing pens and hog shelters.



DUCT WORK



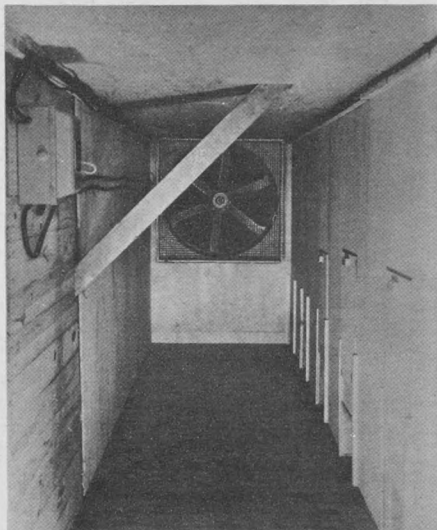
WHILE the value of hay drying systems is largely a matter of local conditions, duct ventilation for livestock is becoming a widespread practice.

For best results buildings must be dry, sanitary and have ample fresh air. An average cow exhales from 10 to 15 lbs., a hog 4 to 5 lbs., and 100 hens 4 to 5 lbs. of water daily. This moisture can condense on bedding, windows, walls and ceilings in cold weather. Resulting unhealthy wet conditions decrease returns from livestock.

Moisture vapor can be removed by a properly designed ventilating system. A natural draft ventilating system will operate effectively if the building is tight and insulated so that heat produced by livestock is conserved to heat incoming fresh air. Plywood ducts provide the necessary tight, crackproof surface to prevent cold air from entering and hindering the flow-off of warm, moisture-laden air. When corners cannot be avoided in ductwork, the curved corners possible with flexible plywood are superior to the sharp angles usual with other materials.

The ventilating duct should be insulated to prevent condensation in the duct.

Once installed, ventilating systems, particularly when fans are used, are difficult to change, so it is advisable to consult your district agriculturist or University Department of Agriculture engineer. Publication No. 859 "Principles of Barn Ventilation" available from the Department of Agriculture, Ottawa, gives excellent detailed advice.



Main duct of hay drier. Openings are to branch ducts under hay.

MOW HAY CURING—Hay drying by forced ventilation has been developed in some parts to reduce weather hazards and to help retain the quality and nutritive value of the crop.

Disadvantages should be considered too. Partly dry hay is heavy to handle. It packs tight and is hard to remove from the mow unless chopped. In exceptionally humid areas it may be necessary to heat the air used in the ventilating system.

Numerous hay drying systems have been devised and all have one thing in common—a motor driven blower forces air through a distributor system and up through the hay. Sylvaply plywood is the ideal material for building the necessary ductwork.

HOME FREEZER CABINETS



THE popularity of frozen foods has created new interest in low temperature freezing storage equipment for the farm home. Sylvaply plywood $\frac{3}{4}$ " or $\frac{1}{2}$ " is excellent material for a simple home-built freezer cabinet. Plans are published from time to time, some by refrigeration companies specializing in pre-assembled units for installation in home-made cabinets.

The principle of the cabinet is that a plywood box sits in a larger plywood box with insulation all around. Two 2x4's on edge lengthwise with two more 2x4's crosswise provide the base on which the inner box rests.

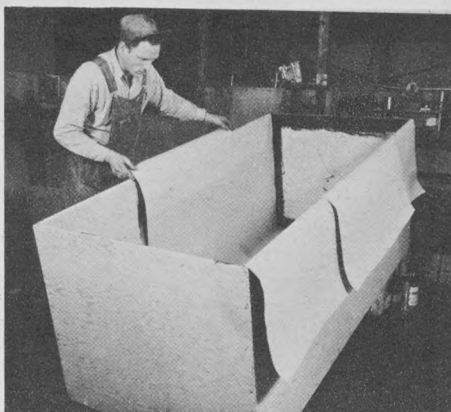
The inner box is made for 20 or 30 cubic foot capacity according to the type of refrigeration equipment available. The outer box should be 14" wider and longer and 7" deeper to accommodate the insulation.

The vapor seal on the inner side and bottom of the outer box is of utmost importance. It must be carefully installed to prevent outside vapor from penetrating through the outer wall, floor or lids of the cabinet into the insulation and wetting it.

Use only a good vapor barrier paper made and sold specially for the purpose such as Vabar and Scutan vapor barrier paper.

Apply vapor barrier paper immediately after painting an 8" wide strip inside the box, including all corners, with an asphalt emulsion such as Sidney Standard Emulsion No. C-13HBC. Paper should be lapped at least 12" and the edges sealed with the emulsion. Paint for the outside may be any type or color desired, but a three-coat enamel finish is recommended. For the inside special odorless refrigeration paint only should be used.

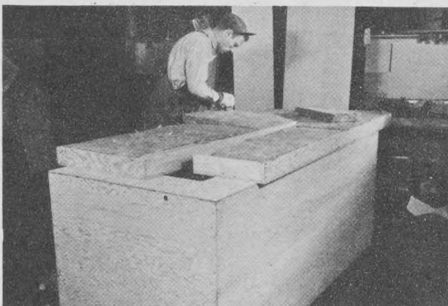
Pictures at right are from the "Sylvaply Freezer Cabinet" plan, available free from lumber dealers or by writing direct to MacMillan & Bloedel Limited, 837 West Hastings Street, Vancouver.



Installing vapor barrier paper in outer plywood box. Note overlap which is tucked in against inner box after insulation installed.

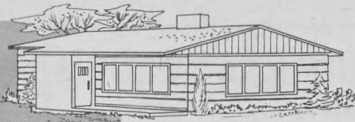


Installing Fiberglas insulation in bottom of box. Note supports for inner box.

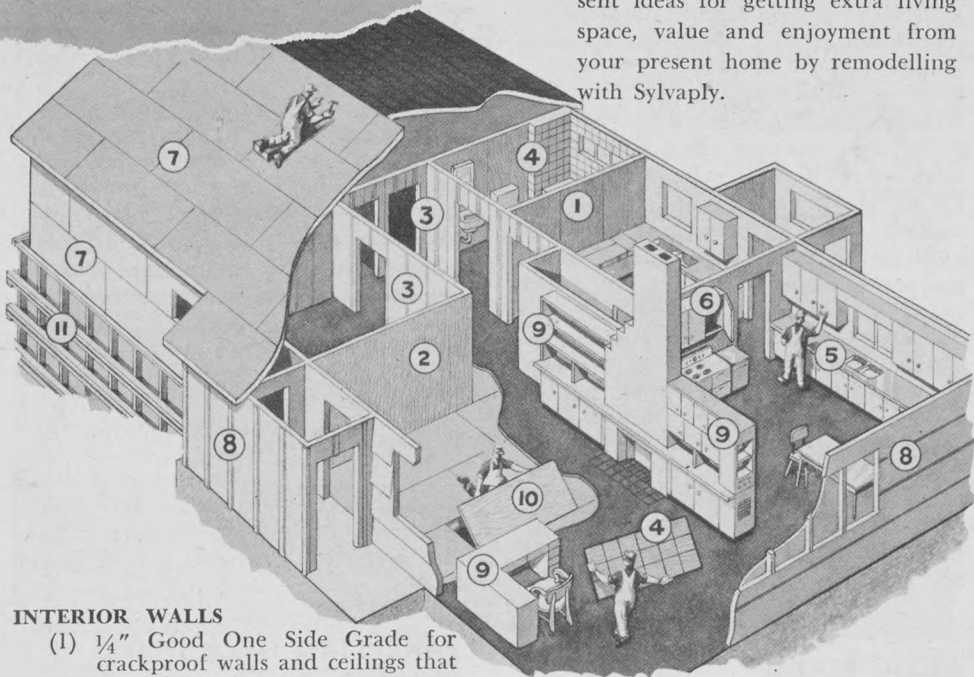


Before insulating lid and top, install vapor barrier as described for outer box.

WHERE TO USE SYLVAPLY IN YOUR HOME



Drawing shows how to use Sylvaply for building "dry-wall" homes with the strength, warmth and beauty of real Douglas Fir. Other pages present ideas for getting extra living space, value and enjoyment from your present home by remodelling with Sylvaply.



INTERIOR WALLS

- (1) $\frac{1}{4}$ " Good One Side Grade for crackproof walls and ceilings that last a housetime.
- (2) $\frac{1}{4}$ " Sylva-Cord—beautifully embossed plywood with a pressure moulded scuff-proof surface.
- (3) $\frac{1}{4}$ " Sylva-Craft—beaded pattern impressed lengthwise on panels. Self-concealing joints.

CEILINGS

- (4) $\frac{1}{4}$ " Sylva-Tile—panels vee grooved in patterned squares of 12", 16" or 24". (Available in 4" and 6" tile pattern for kitchen and bathroom walls). Invisible panel joints.

CABINETS AND CUPBOARDS

- (5) $\frac{3}{4}$ " Good One Side grade for kitchen built-ins to match modern appliances in convenience and good looks.
- (6) Good One Side Solid Back grade is preferred for doors and other surfaces where both sides are to show.

WALL AND ROOF SHEATHING

- (7) $\frac{5}{16}$ " Unsanded Sylvaply Sheathing—the utility grade for all sheathing and general construction.

EXTERIOR WALLS

- (8) $\frac{3}{8}$ " Good One Side grade for quickly applied siding. For summer camps or small, insulated homes, $\frac{1}{4}$ " or $\frac{3}{8}$ " Sylvaply may be used as a single exterior wall covering combining sheathing and siding.

BUILT-INS

- (9) $\frac{1}{2}$ " or $\frac{3}{4}$ " Good One Side grade for self-framing built-in furniture and storage walls.

SUB-FLOORING

- (10) $\frac{5}{8}$ " Sheathing grade for single deck sub-floors under lino, asphalt tile or wall-to-wall carpet. If lumber sub-floor already in, use $\frac{1}{4}$ " or $\frac{5}{16}$ " Sylvaply as perfect underlayment for lino, tile or carpet.

CONCRETE FORM WORK

- (11) $\frac{5}{8}$ " Good One Side Sylvaply is the standard for concrete form work. Panels can be re-used many times with oiling between uses, or can be re-used for sub-flooring or other purposes.

EXTRA ROOMS AND REMODELLING

In this day of cramped quarters waste space is valuable. You can finish basements and attics off easily with large Sylvaply panels and sometimes double the usable space in your home.

Attractive remodelling can be carried out at low cost when you do the work yourself with Sylvaply Douglas Fir plywood. Only ordinary tools are needed. Use $1\frac{1}{2}$ " casing or finishing nails for all panelling. Nail 6" apart on panel edges, 8" apart on studs between.

Make a rough sketch of your ideas with dimensions. After studying drawings Nos. 1 and 2 to refresh your memory of the names of the various supports, discuss your plan with your lumber dealer. He will help you decide the amount of Sylvaply and lumber required and will advise you on other details.

ATTIC ROOMS

If your attic has a rough sub-floor, you can nail down $5/16$ " Sylvaply sheathing to provide a smooth underlay for inexpensive lino.

Make sure studs are in line and plumb. If out-of-line studs cannot be tapped into position, use 2" common nails to fasten board strapping across the studding about 16" apart. Sighting along these boards and using a plumb bob, tap boards out from studding here and there to secure a straight, plumb surface for panelling. Block up gaps between boards and studs with scrap so your strapping will not move back out of line when you are nailing on the panels.

If existing ceiling ties are too low, nail on new ties, then remove the old ones.

BASEMENT ROOMS

Partition walls are easy but care must be taken when panelling damp outside walls. Avoid dead air spaces that could lead to condensation, causing stain and wood decay.

Masonry walls can be strapped for panelling but it is usually better to put up studs at least $\frac{1}{2}$ " away from the masonry. Place floor plates into position with blocks to hold them away from wall. Secure top plate to the bottom of the joists, making sure, with the aid of a plumb bob, that this is directly above the floor plate. Toe-nail 2x4 studding in position. Space studs exactly 16" or 24" apart and make sure they are plumb.

Ceiling can be panelled by nailing Sylvaply directly to the joists. Insert blocking between joists so that a nailing surface is provided for all panel edges.

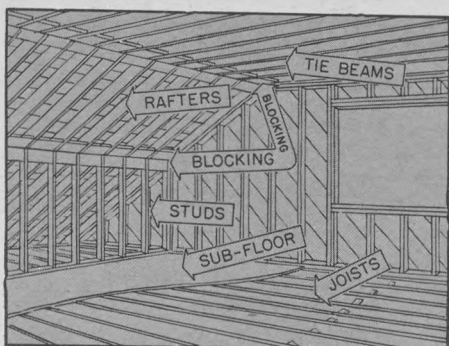
PANELLING OVER OLD PLASTER

Locate the studs by light hammer taps or by driving nails experimentally. Begin panelling from one corner, making certain that the vertical edge of the panels meet on the center of a stud. The bottom edge of the plywood can rest on the top edge of the present baseboard.

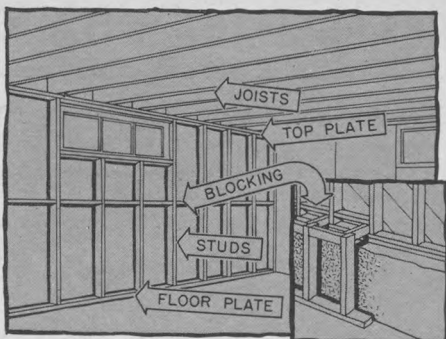
If plaster is badly cracked, it should be strapped, or removed altogether down to the studs before panelling.

PARTITIONING ROOMS

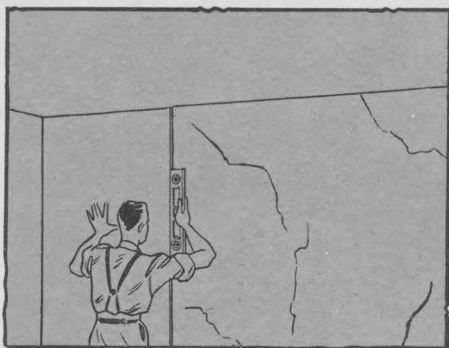
Sometimes it is possible to divide a large room by a partition and thus gain extra living space. If the ceiling joists run the same way as the intended partition, nail the top plate through to the joist nearest the dividing line. See sketch No. 6.



1 Standard attic construction. Note blocking which should be inserted for perfect paneling, or use strapping method described on facing page.



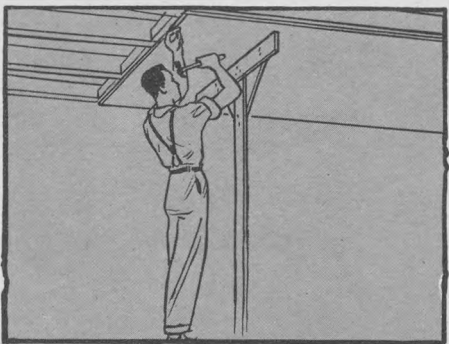
2 Typical basement framing ready to panel. Inset shows method of framing part-masonry wall for paneling. For full masonry wall see facing page.



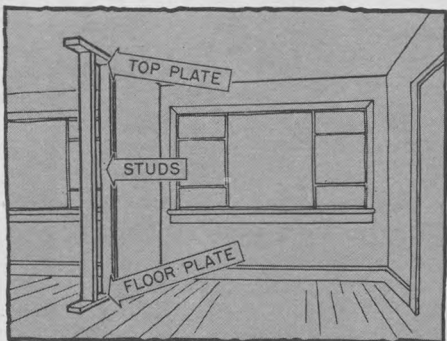
3 Start panelling from one corner and work around room. Fit first panel carefully straight up and down so all following panels will be perpendicular.



4 If plywood panels have been sawn, edges should be planed true. Lightly nailing panel to back of a bureau makes job easy. Nail-holes can be putty filled.



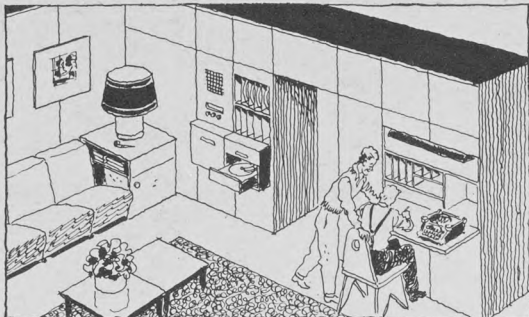
5 By means of a temporary support, lightly nailed near top of wall, and a T support which will reach from floor to ceiling, panels can be easily raised and held for nailing to ceiling.



6 Partitions: Top plate is nailed to ceiling joists with $3\frac{1}{4}$ " common nails. Bottom plate is positioned with plumb bob and nailed. Studs are toe-nailed into top and bottom plates.

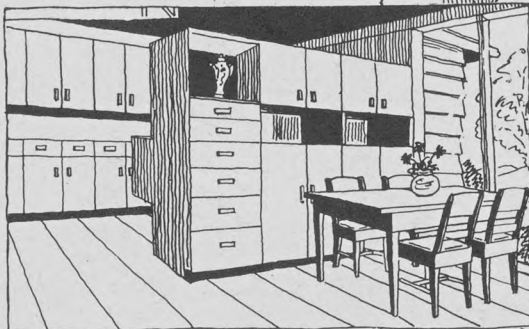
REMODELLING WITH STORAGE WALLS

Storage walls are space saving features in today's new homes—and can form an inexpensive part of your remodelling when you do the work yourself with Sylvaply. Here are examples.



New Sylvaply plywood storage wall between hall and living room provides closets on hall side with smart built-ins for the living room. A study corner for junior is included.

A plywood-built recreation wall, with plenty of storage for his sports equipment, books and records, makes pop's "office" the envy of all.



This double-duty storage wall, accessible from both sides, serves to partition the kitchen and dining area.

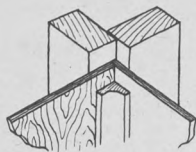
When you build a basement hobby room, a bedroom or a playroom, it takes only a little more planning and plywood to get many cubic feet of extra storage space at the same time.



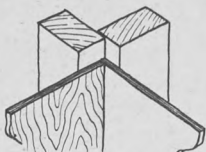
PLYWOOD JOINERY IS SIMPLE

No lumber framing is required for most cabinet projects built with Sylva-ply. $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " are useful thicknesses for space saving built-ins and furniture.

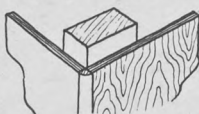
How to turn inside or outside corners in panelling a room.



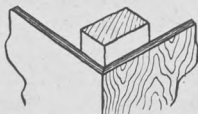
(1) Use cove mould or quarter round.



(2) Simple butt joint.

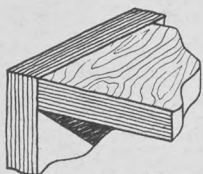


(3) Quarter round to fit panel for outside corner.

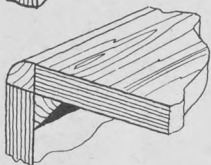


(4) Mitred corners require careful fitting but are neat.

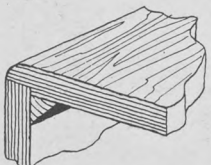
Four ways to frame plywood corners—gluing with nailing is recommended.



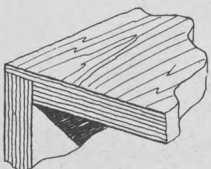
Simple butt joint glued and nailed.



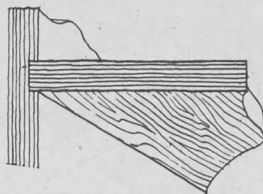
Quarter round with angle backing.



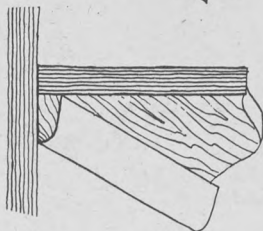
Shallow rebate with angle backing.



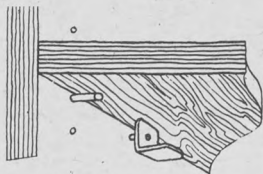
Deep rebate—backing unnecessary.



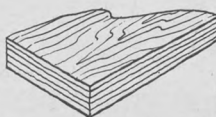
For shelving rebated construction is strongest.



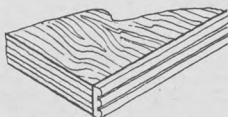
A small mould makes a strong support and simplifies construction.



For adjustable shelves drill small holes for pins or shelf hangers.

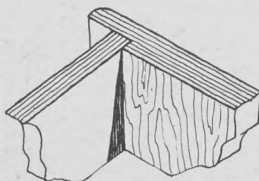
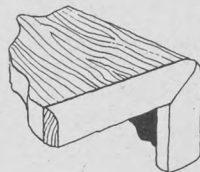


Edge finishing . . . A highly sanded edge looks well.



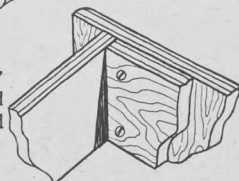
Or an applied mould may be used.

Another type of applied mould glued to edges.



For drawers a rebated edge conceals the jamb.

But 2 pieces of $\frac{3}{8}$ " plywood can be used as shown to avoid rebating.



HOW TO FINISH DOUGLAS FIR PLYWOOD

INTERIOR FINISH—Color-tone or “Wiped-down” Effects

A coat of household wax produces a pleasing natural finish but cannot later be painted. To retain the natural figuring of Douglas Fir plywood, an inexpensive finish can be secured with a single coat of interior white undercoater pigmented to the desired tint and thinned out so that the grain of the wood will show through. A second coat of clear white shellac, followed by a coat of flat varnish, will add to the durability of this finish and give it lustre.

INTERIOR FINISH (Painting)

Usual types of good interior flat wall paints or enamels are satisfactory for plywood, and priming with a clear synthetic resin sealer is recommended. Sanding with No. 1/2 sandpaper before applying the undercoater and careful resanding with No. 0 sandpaper between following coats achieves satin-smooth results.

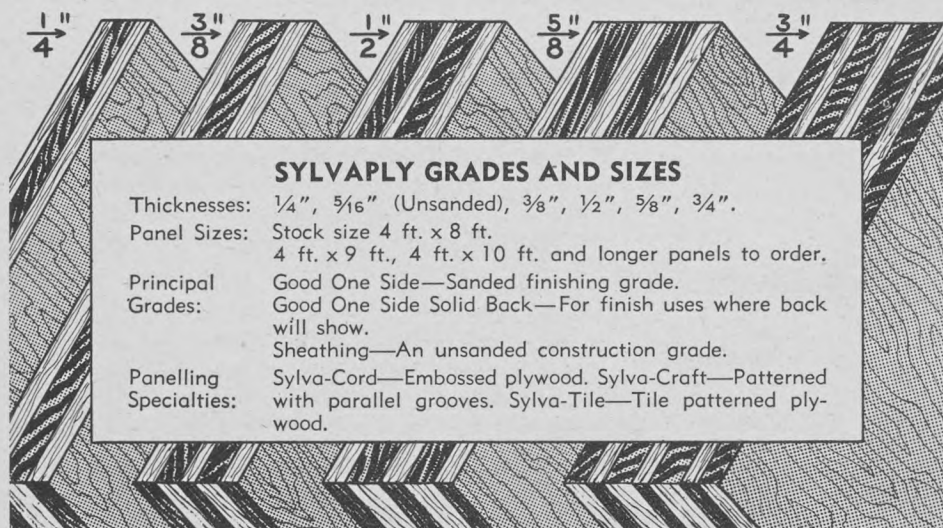
The hard moulded surface of embossed Sylva-Cord can be beautifully

finished with one or two coats of flat wall paint well brushed on. Alternatively, pleasing two-tone effects can be secured with one good coat of white undercoater followed by a wiped-down finish of well thinned out paint of the desired shade.

EXTERIOR FINISH

The best paint job for wood siding is also the best for exterior applications of Douglas Fir plywood. Three coats of high quality exterior paint are suggested. Aluminum house paint made especially for use on exterior woodwork provides an excellent first coat that improves the durability of the paint job. Caution: Aluminum paints or enamels made for other purposes are unsuitable for priming exterior woodwork.

Careful sealing of edges should not be overlooked to guard against paint blistering and peeling caused by moisture creeping in behind the paint film. To prevent this type of exterior paint failure seal all edges of the plywood with paint or, better still, knife edges with white lead paste before painting.



SYLVAPLY GRADES AND SIZES

Thicknesses:	1/4", 5/16" (Unsanded), 3/8", 1/2", 5/8", 3/4".
Panel Sizes:	Stock size 4 ft. x 8 ft. 4 ft. x 9 ft., 4 ft. x 10 ft. and longer panels to order.
Principal Grades:	Good One Side—Sanded finishing grade. Good One Side Solid Back—For finish uses where back will show. Sheathing—An unsanded construction grade.
Panelling Specialties:	Sylva-Cord—Embossed plywood. Sylva-Craft—Patterned with parallel grooves. Sylva-Tile—Tile patterned plywood.

PEOPLE WHO CAN HELP YOU WITH YOUR FARM PLANNING

Extension Service of Departments of Agriculture at Provincial capitals and at
Ottawa.

Nearest District Agriculturist or Agricultural Representative.
Faculty of Agriculture at your nearest University.

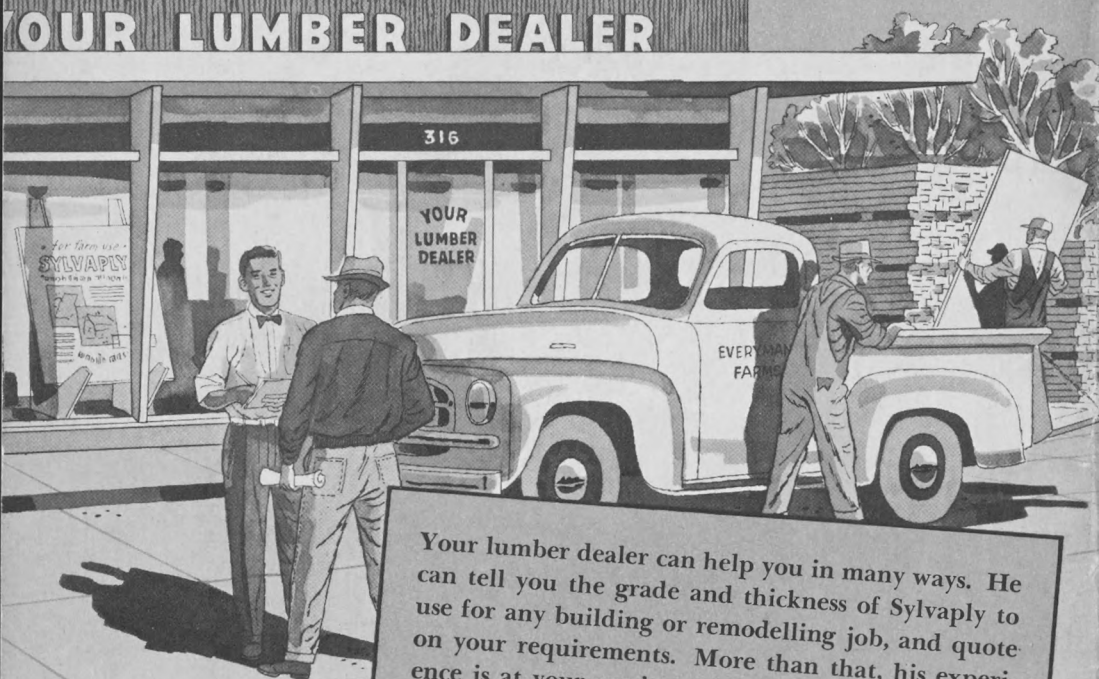
- NEWFOUNDLAND** Officer-in-Charge, Experimental Station, St. John's
- PRINCE EDWARD ISLAND** Superintendent, Experimental Station, Charlottetown
- NOVA SCOTIA** Superintendent, Experimental Farm, Nappan
Superintendent, Experimental Station, Kentville
- NEW BRUNSWICK** Superintendent, Experimental Station, Fredericton
- QUEBEC** Superintendent, Experimental Station, Lennoxville
Superintendent, Experimental Station, Ste. Anne de la
Pocatiere
Superintendent, Experimental Station, L'Assomption
Superintendent, Experimental Station, Normandin
Officer-in-Charge, Experimental Substation, Ste. Clothilde
- ONTARIO** Central Experimental Farm, Ottawa
Superintendent, Experimental Farm, Kapuskasing
Superintendent, Experimental Station, Harrow
Officer-in-Charge, Experimental Substation, Delhi
Officer-in-Charge, Experimental Substation, Smithfield
Officer-in-Charge, Experimental Substation, Woodslee
- MANITOBA** Superintendent, Experimental Farm, Brandon
Superintendent, Experimental Station, Morden
- SASKATCHEWAN** Superintendent, Experimental Farm, Indian Head
Superintendent, Experimental Station, Scott
Superintendent, Experimental Station, Swift Current
Superintendent, Experimental Station, Melfort
Superintendent, Experimental Substation, Regina
- ALBERTA** Superintendent, Experimental Station, Lacombe
Superintendent, Experimental Station, Lethbridge
Superintendent, Experimental Station, Beaverlodge
Superintendent, Range Experiment Station, Manyberries
- BRITISH COLUMBIA** . . . Superintendent, Experimental Farm, Agassiz
Superintendent, Experimental Station, Summerland
Superintendent, Experimental Station, Prince George
Superintendent, Experimental Station, Saanichton
Superintendent, Experimental Substation, Smithers
Superintendent, Range Experiment Station, Kamloops
- YUKON AND NORTHWEST TERRITORIES** . Officer-in-Charge, Experimental Substation, Whitehorse
Officer-in-Charge, Experimental Substation, Fort Simpson
- COAST TO COAST** Your local lumber dealer

Where to buy

SYLVAPLY

DOUGLAS FIR
WATERPROOF-GLUE PLYWOOD

YOUR LUMBER DEALER



Form M&B 66

Your lumber dealer can help you in many ways. He can tell you the grade and thickness of Sylvaply to use for any building or remodelling job, and quote on your requirements. More than that, his experience is at your service to help you with your planning. Consult him on all your building problems.

WILSON - GREGORY LUMBER CO. LTD.

44 Higgins Ave.

WINNIPEG, MAN.

Tel. 928115 - 6

MACMILLAN & BLOEDEL SALES
VANCOUVER - EDMONTON - CALGARY - WINNIPEG
LONDON - WINDSOR - TORONTO - MONTREAL - QUEBEC CITY